

Due at beginning of class Monday, February 9

This should be your own work (no other people or software (including AI)).

Questions about quiz should be directed to Prof. Arnold

Short explanations are helpful.

Name: \_\_\_\_\_

1. How many non-negative integer solutions are there to  $x_1 + x_2 + x_3 + x_4 = 50$ ?
2. How many non-negative integer solutions are there to  $x_1 + x_2 + x_3 + x_4 = 50$  where  $x_1 \geq 16$ ?
3. How many non-negative integer solutions are there to  $x_1 + x_2 + x_3 + x_4 = 50$  where  $x_i \leq 15$ ,  $i = 1 : 4$ ?